

REMARKS

This Amendment is filed in response to the final Office Action dated January 25, 2007. This application should be allowed and the case passed to issue. No new matter is raised by this amendment. The amendment to claim 1 is supported by canceled claim 18.

Claims 1-3 and 19 are pending in this application. Claims 1-3, 18, and 19 have been rejected. Claim 1 is amended in this response. Claim 18 is canceled in this response. Claims 4-17 were previously canceled.

Claim Rejections Under 35 U.S.C. § 102

Claims 1-3, 18, and 19 were rejected under 35 U.S.C. § 102(e) as being anticipated by Higashi et al. (U.S. Pat. No. 7,045,950). The Examiner maintained that the Higashi et al. disclosure of an impurity concentration of less than 1000 ppm (abstract) anticipates the claimed Cu atom concentration of not higher than 500 ppm and 200 ppm.

Claims 1-3, 18, and 19 were rejected under 35 U.S.C. § 102(e) as being anticipated by Toguchi et al. (U.S. Pat. No. 6,565,993). The Examiner maintained that the silence of Toguchi et al. regarding impurities means that zero impurities may be present and that zero impurities reads on not higher than 500 ppm.

These rejections are traversed, and reconsideration and withdrawal thereof respectfully requested. The following is a comparison between the present invention, as claimed and the cited prior art.

An aspect of the invention, per claim 1, is an organic electroluminescent device comprising an organic compound layer including at least one organic compound film containing an organic compound having a phenylamino group. The organic compound having a

phenylamino group is produced by Ullmann reaction. The organic compound layer contains copper atoms as impurities in a weight concentration of not higher than 500 ppm.

The Examiner has not established a prima facie case of anticipation. As disclosed in the specification (page 18), the Ullmann reaction employs copper powder as a catalyst. Though, the Examiner characterized claim 18 as a product-by-process claim, the process is one in which copper is present in the reaction composition which produces the compound having a phenylamino group. Higashi et al. and Toguchi et al. are silent concerning copper impurity. Even though Higashi et al. teach the use of copper powder in Example 1, Higashi et al. do not measure the copper powder remaining in the reaction product. Higashi et al. only look for halogen and organic impurities. The teachings of the prior art must be considered as a whole for all that they teach. When Higashi et al. is taken as a whole, it is clear that the 1000 ppm impurity maximum refers to organohalogen impurities, not copper impurity.

Furthermore the claimed 500 ppm (claim 1) and 200 ppm (claim 2) copper impurity maximum are much less than the 1000 ppm impurity maximum of Higashi et al. Higashi et al. do not have any explicit teachings of copper impurity in the less than 500 ppm range. When the prior art discloses a range which touches or overlaps the claimed range, but no specific examples falling within the claimed range are disclosed, a case by case determination must be made as to anticipation. In order to anticipate the claims, the claimed subject matter must be disclosed in the reference with "sufficient specificity to constitute an anticipation under the statute." MPEP § 2131.03(II). *See, e.g., Atofina v. Great Lakes Chem. Corp*, 441 F.3d 991, 999, 78 USPQ2d 1417, 1423 (Fed. Cir. 2006) (wherein the court held that a reference temperature range of 100-500 °C did not describe the claimed range of 330-450 °C with sufficient specificity to be anticipatory). When Higashi et al. is considered as a whole, it is clear that Higashi et al. do not disclose the

claimed organic compound layer contains copper atoms as impurities in a weight concentration of not higher than 500 ppm with sufficient specificity to be an anticipatory reference.

As regards Toguchi et al. reference, the Examiner's conclusion that silence in a reference can be interpreted as meaning that the copper impurity is not present, is clearly erroneous. As is the case with Higashi et al., Toguchi et al. do not disclose the claimed organic compound layer contains copper atoms as impurities in a weight concentration of not higher than 500 ppm with sufficient specificity to be an anticipatory reference.

In addition, the Examiner's conclusion that the present claims include the situation where no copper impurity is present is traversed. Claim 1 expressly requires "copper atoms as impurities." Because copper atoms are required, the scope of claim 1 can not include the situation where no copper is present.

The Examiner cited several portions of the MPEP as allegedly supporting the Examiner's position. The Examiner's reliance on the MPEP is misplaced. MPEP § 2144.04, for example, refers to situations when a claimed range is obvious. The Office Action, however, contains anticipation rejections, not obviousness rejections. The Examiner's reliance on MPEP § 2144.04 suggests that the Examiner is implying that the amount of copper is obvious. If so, these rejections should be withdrawn in view of the evidence of unexpected results in Table 1 of the present specification which would overcome the apparent assertion of obviousness. As regards the reference to MPEP § 2173.05, the present claims **expressly require** that the organic compound layer contains copper atoms.

The factual determination of lack of novelty under 35 U.S.C. § 102 requires the disclosure in a single reference of each element of a claimed invention. *Helifix Ltd. v. Blok-Lok Ltd.*, 208 F.3d 1339, 54 USPQ2d 1299 (Fed. Cir. 2000); *Electro Medical Systems S.A. v. Cooper*

Life Sciences, Inc., 34 F.3d 1048, 32 USPQ2d 1017 (Fed. Cir. 1994); *Hoover Group, Inc. v. Custom Metalcraft, Inc.*, 66 F.3d 399, 36 USPQ2d 1101 (Fed. Cir. 1995); *Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 24 USPQ2d 1321 (Fed. Cir. 1992); *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051 (Fed. Cir. 1987). Because Higashi et al. and Toguchi et al. do not disclose the claimed organic compound layer wherein the organic compound is produced by Ullmann reaction and contains copper atoms as impurities in a weight concentration of not higher than 500 ppm, as required by claim 1, Higashi et al. and Toguchi et al. do not anticipate claim 1.

Applicants further submit that Higashi et al. and Toguchi et al., whether taken alone, or in combination, do not suggest the claimed electroluminescent device.

The dependent claims are allowable for at least the same reasons as claim 1, and further distinguish the claimed electroluminescent device.

In view of the above amendments and remarks, Applicants submit that this case should be allowed and passed to issue. If there are any questions regarding this Amendment or the application in general, a telephone call to the undersigned would be appreciated to expedite the prosecution of the application.

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To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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